



U.S. Department
of Transportation
**Pipeline and
Hazardous Materials
Safety Administration**

**IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS
CERTIFICATE USA/0722/S-96, REVISION 0**

400 Seventh Street, S.W.
Washington, D.C. 20590

This certifies that the source described has been demonstrated to meet the regulatory requirements for special form radioactive material as prescribed in the regulations of the International Atomic Energy Agency¹ and the United States of America² for the transport of radioactive material.

1. Source Identification - QSA Global, Inc. Model X0779 Source Assembly (Manufactured on or after July 5, 1988).
2. Source Description - Cylindrical single encapsulation made of stainless steel and tungsten inert gas or laser seal welded. Approximate outer dimensions of the single encapsulation are 3.0 mm (0.12 in.) in diameter and 26.3 mm (1.04 in.) in length. Nominal wall thickness is 0.15 mm (0.006 in.). The single encapsulation must be installed inside the rectangular shutter housing secured with screws welded in-place. Approximate outside dimensions of the shutter housing are 22.0 mm (0.87 in.) in height, 65.0 mm (2.56 in.) in width, and 45.0 mm (1.77 in.) in length. Construction shall be in accordance with attached AEA Technology QSA, Inc. Drawing Nos. RBA62007, Rev. A and RBA61601, Rev. A.
3. Radioactive Contents - No more than 7.4 GBq (200.0 mCi) of Americium-241. The Am-241 is in the form of an oxide incorporated into a ceramic enamel.
4. Quality Assurance - Records of Quality Assurance activities required by Paragraph 310 of the IAEA regulations¹ shall be maintained and made available to the authorized officials for at least three years after the last shipment authorized by this certificate. Consignors and consignees in the United States exporting or importing shipments under this certificate shall satisfy the requirements of Subpart H of 10 CFR 71.
5. Expiration Date - This certificate expires on March 31, 2011.

¹ "Regulations for the Safe Transport of Radioactive Material, 1996 Edition (Revised), No. TS-R-1 (ST-1, Revised)," published by the International Atomic Energy Agency(IAEA), Vienna, Austria.

² Title 49, Code of Federal Regulations, Parts 100-199, United States of America.

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This certificate is issued in accordance with paragraph 804 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the November 14, 2005 petition by QSA Global, Inc., Burlington, MA and in consideration of other information on file in this Office.

Certified By:



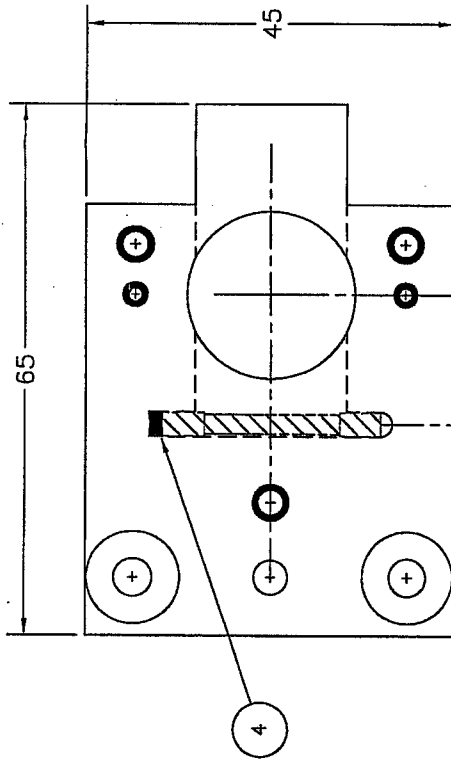
Mar 16 2006

(DATE)

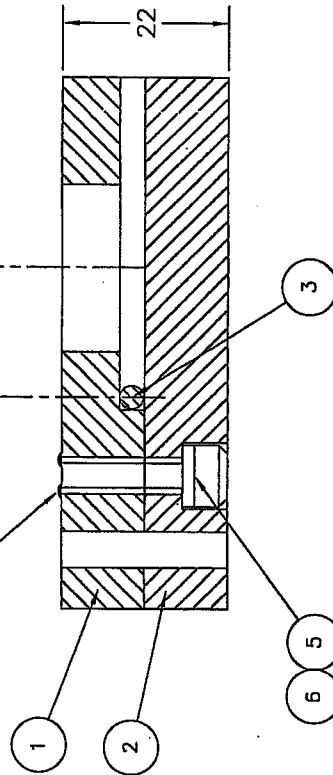
 Robert A. McGuire

Associate Administrator for Hazardous Materials Safety

Revision 0 - Original issue.



T.I.G. OR LASER
WELD SEE NOTE



NOTE: WELD SCREW TO BODY IN
THREE POSITIONS AND AFTER
INSERTION OF M4x14 SCREWS.

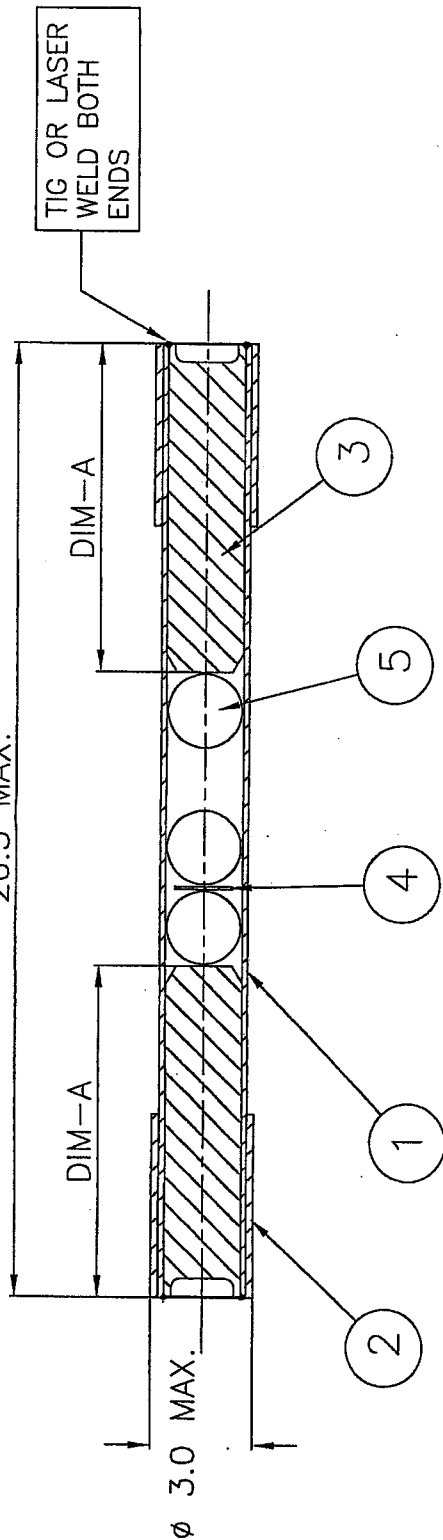
NOTE:
1) DIMENSIONS ARE IN MILLIMETERS.

2) TOLERANCE:
X ± 2
X.X ± 0.2

ITEM #	DESCRIPTION	QTY.
1	SHUTTER UPPER SECTION, STAINLESS STEEL	1
2	SHUTTER LOWER SECTION, STAINLESS STEEL	1
3	X1122 SOURCE CAPSULE, STAINLESS STEEL	1
4	ANTI-RATTLE SPRING, STAINLESS STEEL	1
5	M4 x 14 SCREW, STEEL	3
6	M4 SPRING WASHER, STEEL	1

APPROVALS	DATE	 40 NORTH AVE. BURLINGTON, MA 01803	DESCRIPTIVE DRAWING
J.D. Pina R. P. Pina	7 Nov. 05 17 Nov 05		
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES: FRACTIONS ± 1/8 X.X ± 0.12 X.XX ± 0.06 X.XXX ± 0.020		TITLE SHUTTER ASSEMBLY X0779	
ERF# 1164		SIZE B DWG. NO. RBA62007 SCALE: NTS	RE: A SHEET 1 OF 1

26.3 MAX.



TYPE	DIM-A
X1122/1	5
X1122/2	9

NOTE:

1) DIMENSIONS ARE IN MILLIMETERS.

2) SLEEVES, ITEM 2, TO BE ATTACHED TO BODY, ITEM 1, WITH EPOXY RESIN.

ITEM #	DESCRIPTION	QTY.
1	BODY, STAINLESS STEEL	1
2	SLEEVE, STAINLESS STEEL	2
3	PLUG, STAINLESS STEEL	2
4	CERAMIC FIBER PACKING	A/R
5	Am241 GLASS BEADS	A/R

APPROVALS	DATE
<i>D. Pri</i>	7 Nov 07
<i>A. Balle</i>	7 Nov 07

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES
TOLERANCES:
FRACTIONS $\pm 1/8$
X.X ± 0.12
X.XX ± 0.06
X.XXX ± 0.020

ERF#
1164



DESCRIPTIVE
DRAWING

TITLE	ASSEMBLY DRAWING CAPSULE X1122 /1 & /2
SIZE	B
DWG. NO.	RBA61601
SCALE	NTS
SHEET	1 OF 1
REV	A